

EXHIBIT G

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 1 THE DEPOSITION OF SCOTT MINNICH, Ph.D.
 2 was taken on behalf of the Plaintiffs on this, the
 3 26th day of May 2005, at University of Idaho, Life
 4 Sciences Building, Room 144, Moscow, Idaho, before
 5 M & M Court Reporting Service, Inc., by Neil Cooley,
 6 Court Reporter and Notary Public within and for the
 7 State of Idaho, to be used in an action pending in
 8 the United States District Court for the Middle
 9 District of Pennsylvania, said cause being Civil
 10 Action No. 4:04-CV-2688 in said court.

11 THEREUPON, the following proceedings were
 12 adduced, to wit:

13 [REDACTED]
 14 [REDACTED]
 15 [REDACTED]
 16 [REDACTED]

17 EXAMINATION:

18 QUESTIONS BY MR. LUCHENITSER.

19 Q. Dr. Minnich, could you please state your
 20 name for the record?

21 A. Scott Arthur Minnich.

22 Q. And have you had your deposition taken
 23 before?

24 A. Never.

25 Q. I'm just going to give you some standard

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 1 Q. Let me pull out your expert report, and
 2 we are going to mark that as Exhibit 1
 3 (Deposition Exhibit No. 1 marked for
 4 identification)
 5 BY MR. LUCHENITSER:
 6 Q. We have marked as Exhibit 1 the expert
 7 report of Scott Minnich. And if you could flip to
 8 Exhibit A to Exhibit 1, which is the biographical
 9 sketch in the back, please, does that Exhibit A
 10 correctly reflect your educational and employment
 11 history?

12 A. It does.

13 Q. And is everything in there still correct
 14 or current or has something changed since you
 15 submitted it?

16 A. No, it is still current.

17 Q. [REDACTED]

18 [REDACTED]

19 A. [REDACTED]

20 [REDACTED]

21 (Off the record.)

22 MR. LUCHENITSER. Back on the record.

23 BY MR. LUCHENITSER:

24 Q. [REDACTED]

25 [REDACTED]

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 1 instructions. Please answer all the questions
 2 orally. Please don't nod your head or say uh-huh or
 3 huh-uh, because then the court reporter won't be
 4 able to take down your answer accurately.
 5 If you do not hear a question or don't
 6 understand a question, please tell me. Please wait
 7 until I have finished asking my question before you
 8 begin your answer. And if you realize that an
 9 earlier answer you gave was inaccurate or
 10 incomplete, please say that you would like to
 11 correct a former answer and I will give an
 12 opportunity to do so.
 13 And if your attorney objects to one of my
 14 questions, you are still required to answer the
 15 question unless your attorney instructs you not to
 16 answer.
 17 And do you understand the instructions I
 18 have given you?
 19 A. I do.
 20 Q. And do you understand that you under oath
 21 and are required to tell the truth?
 22 Q. I do.
 23 Q. Is it correct that you are serving as an
 24 expert for the defendants in this case?
 25 A. Yes.

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 1 [REDACTED]
 2 Q. And can you tell me what the principal
 3 opinions you have in this case are?
 4 A. That intelligent design is a viable
 5 scientific theory.
 6 Q. Anything else?
 7 A. No, I mean in terms of my expertise in
 8 this case, you know, it is whether or not
 9 intelligent design is a competing theory in part to
 10 the current consensus in biology.
 11 Q. When you say intelligent design is a
 12 viable scientific theory, can you explain what you
 13 mean by viable?
 14 A. In other words, it is looking at the
 15 public evidence and interpreting that evidence in
 16 the sense that the design we see in nature is real
 17 design, not just apparent design, which most of my
 18 colleagues hold the latter view.
 19 Q. Uh-huh, so when you use the word viable,
 20 do you mean it is real?
 21 A. It's real, it's real, okay? It is
 22 science, it is not a religious position. It has
 23 metaphysical implications, like evolution does, but
 24 that is incidental, secondary to its explanatory
 25 power when we look at the facts and experiences that

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1 we see in the natural world.

2 Q. What are the metaphysical implications
3 that intelligent design has?

4 A. That there is design behind it, that
5 there is an intelligence in part responsible for
6 what we see

7 Q. And let me ask you, why do you use the
8 word metaphysical?

9 A. Well, it is philosophical, metaphysical.
10 I mean, in that realm it doesn't require a religious
11 position, you know? It can be more of -- a person
12 can hold the view of intelligent design as being
13 real and believe in the God of Espinoza or Einstein,
14 the God of the philosophers, not of a traditional
15 God that we think of in the context of traditional
16 religions

17 Q. Does your report identify all the subject
18 matter that you are going to testify about at trial?

19 MR. WHITE: I have to object because I
20 couldn't hear you.

21 BY MR. LUCHENITSER:

22 Q. I'm sorry, does your expert report
23 identify all the subject matter that you will
24 testify about at trial?

25 A. That's an absolute statement, and being a

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1 organisms that cause disease.

2 Q. Has that area been the focus of your
3 professional research?

4 A. Yes.

5 MR. WHITE: Object as far as what time
6 frame you are talking about for his professional
7 research.

8 THE WITNESS: Yes, currently. I have had
9 other experiences, too. I have been in diagnostics,
10 I have been in developmental biology, and -- I'm
11 trying to think in terms of just how you quoted
12 this, basic molecular biology, molecular genetics.

13 As an example, the controversy about
14 genetically engineered foods and BT toxins. I don't
15 know whether you are familiar with this at all,
16 bacillus thuringiensis toxin. This has been
17 incorporated into agricultural plants and has been
18 controversial because of the ethical concerns about
19 introducing or modifying plant genomes.

20 But that bacillus toxin gene I cloned as
21 a post-doc, and we gave it to Monsanto 20 years ago.

22 So occasionally I am called to -- in
23 fact, four or five years ago I had my research
24 notebooks subpoenaed because of a patent lawsuit
25 involved in who owned the rights to that. That was

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1 scientist I always hesitate. But this is -- in
2 terms of my own research and training, it is
3 reflected in this report.

4 Q. Do you intend to express any opinions in
5 this case that have not been included in your
6 report?

7 A. If I am asked a question that is not
8 directly applicable to this report, I may choose to
9 respond or not if I have knowledge in the area. No,
10 this isn't a complete tome of all the knowledge that
11 I have.

12 Q. Do you have any plans to supplement your
13 report in any way?

14 A. No, not at present.

15 Q. Do you consider yourself an expert on any
16 issues relevant to this case?

17 A. As they bring to bear on examples that
18 are being disputed by both camps, you know, the area
19 of irreducible complexity of the bacterial
20 flagellum, molecular machines, genetics,
21 microbiology.

22 Q. What is -- do you have an area of
23 specialty within the discipline of biology?

24 A. I do, I am a microbial geneticist focused
25 on an area we refer to as microbial pathogenesis.

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1 between Monsanto and some other company in terms of
2 who had the right to that gene.

3 Q. Would you consider yourself an expert in
4 evolutionary biology?

5 A. That's a difficult question and I want to
6 qualify it, because I was challenged here at the
7 University of Idaho several years ago when Robert
8 Pennock came and gave a seminar. And he knew my
9 position and he challenged me in the audience with
10 respect to, "How can you, as a practicing
11 contributing scientist, hold the position that is
12 contrary to the very foundation of your discipline?"
13 Okay? This is in front of all of my colleagues and
14 students in a formal departmental seminar.

15 And I responded that, "That's an
16 interesting question, and now that you have raised
17 it, I'm sure a lot of people are interested in my
18 response."

19 What I find interesting in my own
20 experience, and that of colleagues in this
21 department -- and we are the most highly funded and
22 I think the most successful in getting extramural
23 funding, publication in peer-reviewed journals, we
24 have several new faculty so I don't want to make an
25 absolute statement, but, you know, the past couple

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1 intelligent design that are different from the
 2 definition you gave in your report?
 3 A I think my written statement is
 4 consistent with my colleagues in terms of -- you
 5 know, I think there are philosophers of science in
 6 the intelligence design arena that are more
 7 articulate in terms of the philosophical
 8 implications of this.
 9 Q How would you define creationism?
 10 A Creationism, which I think is very
 11 different than intelligent design, uses biblical
 12 reference by which you judge science. In the
 13 traditional sense, scientific creationism held to a
 14 literal interpretation of Genesis and thought that
 15 that was an embodiment of truth and that science
 16 should be filtered through that viewpoint.
 17 I disagree with that stand. In fact, I
 18 was never an active participant in scientific
 19 creationism as it went through the Louisiana and
 20 Arkansas debates, I thought it was out of balance.
 21 Q Is there a difference between creation
 22 science and creationism?
 23 A Well, in terms of definitions, yes, I
 24 think it is subtle. Creationism, again I think in
 25 the traditional sense as it is used in the public

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1 arena, implies a literal interpretation of Genesis.
 2 Scientific creationism then tries to look at the
 3 body of scientific understanding and fit it
 4 consistently with that viewpoint of biblical
 5 interpretation.
 6 Q Is teaching of creationism or creation
 7 science -- is the teaching of that, that forms of
 8 life began abruptly -- begin abruptly in their basic
 9 types, for example, fish with fins and scales, birds
 10 with feathers and beaks and wings?
 11 A That's -- repeat the question because I
 12 want to make sure I understand it.
 13 Q [REDACTED]
 14 [REDACTED]
 15 [REDACTED]
 16 [REDACTED]
 17 [REDACTED]
 18 A [REDACTED]
 19 Q What is the difference between
 20 intelligent design theory and creation science?
 21 A Intelligent design theory isn't dependent
 22 upon any formal religious writing or revelation in
 23 which you are trying to match the natural world to
 24 show consistency. It is simply looking at the
 25 science and asking the question. Is the design that

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1 we all agree is there real or apparent? Okay? It
 2 is a valid question and I think we should be
 3 addressing it at a scientific level in our
 4 inquiries
 5 It is that simple, okay? It doesn't have
 6 any basis of going further than looking or devising
 7 theories or hypotheses to look at how you detect
 8 design. Our record of life on this planet, does it
 9 fit with an intelligent agent or, again, is natural
 10 law, in terms of physics and chemistry, of what we
 11 know of genetics, sufficient to produce the
 12 diversity that we see in life?
 13 And you end right there, yes or no. It
 14 is an interesting question, it is a valid question,
 15 and it should be addressed. I mean, and that's why
 16 we are here, you know? That's what Ken Miller is
 17 writing about. Robert Pennock, he is asking the
 18 question, can natural law come up with de novo
 19 information?
 20 Q Does intelligent design theory reach any
 21 conclusions that are different from the conclusions
 22 reached by creation science?
 23 MR. WHITE Objection as to vagueness,
 24 ambiguity.
 25 BY MR. LUCHENITZER:

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1 Q You can go ahead and answer
 2 MR. WHITE If you understand the
 3 question
 4 THE WITNESS Repeat it one more time, or
 5 let me ask a question to make sure I understand it.
 6 Does creation science and intelligent
 7 design both come to the same conclusion, is that
 8 what you are asking?
 9 BY MR. LUCHENITZER:
 10 Q Let just ask the question, does
 11 intelligent design theory reach any conclusions that
 12 are different from the conclusions reached by
 13 creation science?
 14 A Oh, for sure
 15 Q What are the differences? What different
 16 conclusions does -- what conclusions does
 17 intelligent design theory reach that are --
 18 A Well, creation science, I think, is
 19 really an area of apologetics, religious
 20 apologetics. They want the science to validate the
 21 scriptural content of Genesis, okay? And
 22 intelligent design isn't going to go that far. You
 23 can say that -- looking at the data, what we know in
 24 terms of chemistry and physics, genetics and natural
 25 selection, that there is a real design, and you stop

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1 there.

2 Q. Can you tell me what theistic evolution

3 is?"

4 A. Theistic evolution is the position, as I

5 understand it, that there is a designer or creator

6 that designed the universe, started the clock going,

7 designed the laws of physics and chemistry, and that

8 life, through those laws, emerged and has evolved.

9 But it is more of an impersonal activity. In other

10 words, the machine was started and is removed from

11 that machine, so that organisms do evolve in terms

12 of our common consensus.

13 Q. Can someone who believes in theistic

14 evolution also believe that God in some way guides

15 the progress of evolution?

16 A. Sure, I mean I think you have the entire

17 spectrum of people that believe in a designer or

18 creator in terms of his participation in the world

19 as we know it.

20 Q. What is the difference between theistic

21 evolution and intelligent design theory?

22 A. Theistic evolutionists, I think, agree

23 that given, for instance, the planet earth in its

24 early stages of development had incorporated in it

25 all the necessary components for the emergence of

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1 development of life forms on the planet earth, does

2 intelligent design make any other scientific claims?

3 MR. WHITE: Objection, it is misleading.

4 THE WITNESS: I'm not quite sure what you

5 mean in terms of other scientific claims. Give me

6 an example. You know, is it going to tell me that

7 butter is better for me than margarine? I mean --

8 BY MR. LUCHENITSER:

9 Q. I guess let me try to see if I can

10 rephrase it.

11 What is the scientific content of an

12 intelligent designer, other than the ultimate

13 assertion that there is a designer or designers?

14 A. That's the main principle, okay?

15 Q. Is there anything else?

16 A. I would have to think about it in terms

17 of the question. So if we proceed, I will come back

18 to that.

19 Q. Do you have an opinion, a personal

20 opinion, as to who or what the intelligent designer

21 is?

22 MR. WHITE: Objection as to are you

23 asking for his personal opinion or his opinion as a

24 scientist?

25 BY MR. LUCHENITSER:

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1 life and its subsequent diversity, that there is no

2 input from the designer from that point, okay?

3 So it is really consistent with the

4 Darwinian viewpoint that you just started it by an

5 intelligent agent or God and then everything

6 unfolds.

7 Intelligent design sees a more active

8 part of a designer from the sense that from my own

9 perspective I look at the bacterial flagellum, it

10 has stators and rotors and propellers and u-joints,

11 it is battery powered, it looks like engines that

12 Mazda makes, in one sense, but it is much more

13 sophisticated because there is an algorithm or

14 program that directs its assembly from genetic

15 information and it regulates the timing of synthesis

16 and the position where it is assembled, that that is

17 a product of intelligence.

18 And from my position you don't get these

19 machines by totally natural process. I mean, they

20 can change and evolve, I don't know at what level or

21 to what extent, but the prototypic or aboriginal

22 machine has all the hallmarks of design based on our

23 experience of machines that we manufacture.

24 Q. Other than the ultimate claim that a

25 designer or designers were responsible for the

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1 Q. Do you have a scientific opinion as to

2 who the intelligent designer is?

3 A. No.

4 Q. Do you have a personal opinion?

5 A. Yes, I do.

6 Q. You do. What is your personal opinion?

7 MR. WHITE: Objection as to relevancy.

8 Go ahead.

9 THE WITNESS: I want to make sure that

10 this is -- I mean, I have a problem in terms of

11 giving my opinion, but my experience, when asked

12 these questions, is that they are somewhat loaded.

13 In other words, in my discussion with Robert Pennock

14 when he was here and we were discussing type III

15 secretory systems and the flagellum, claims of

16 intelligent design, he then turned on me in this

17 public audience and said, "Who is the creator?"

18 And I said, "Well, I have an opinion, but

19 we are talking science, why do you want to bring

20 religion into the question?"

21 No, "Who is the creator? Tell us who the

22 creator is?"

23 And in part I think there is an attempt

24 to marginalize people in this area as

25 fundamentalists, you know, Christians that want to

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1 get the bible back into the classroom, and that's
 2 invalid. But I am a Christian, that's my personal
 3 faith
 4 And I also would like to state for the
 5 record that that is not my family's faith tradition
 6 I was an agnostic, probably an atheist, and when I
 7 took a course in biology and was confronted with the
 8 design in the bacteriophage Landa, it made me pause
 9 and think, is this the product of chance and
 10 necessity?
 11 Okay, so I am a Christian because of the
 12 data, not despite it.
 13 Q. So this experience led you to become a
 14 Christian?
 15 MR. WHITE: Objection as of "this
 16 experience."
 17 BY MR. LUCHENITSER:
 18 Q. The experience when you were studying
 19 this life form?
 20 A. No, I think it was a factor, you know, in
 21 my own personal journey, but I had no reason to --
 22 at the point until I started taking biology classes
 23 -- in fact, I was an English history major that took
 24 a general chemistry course that had a molecular
 25 biology component and was so fascinated by the

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1 information that I changed my major, because I was
 2 interested in the science, the beauty of the
 3 science, and the more I studied, it had
 4 implications.
 5 Q. This is when you were an undergraduate.
 6 did you say?
 7 A. Right
 8 Q. [REDACTED]
 9 [REDACTED] is the God?
 10 [REDACTED]
 11 A. [REDACTED]
 12 Q. Is there a consensus within intelligent
 13 design theory as to who the designer is or what it
 14 is?
 15 A. No.
 16 Q. Does intelligent design theory make any
 17 claims as to who or what the designer is?
 18 A. No, in a formal sense it doesn't. It
 19 says you can infer design and therefore designer,
 20 but that's as far as the science goes.
 21 Q. Does intelligent design theory rule out
 22 any type of possible designers?
 23 Q. Not necessarily
 24 Q. Does intelligent design theory rule out
 25 all possible and natural actors as designers?

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1 A. Natural what? I didn't hear your --
 2 Q. Natural actors
 3 A. Natural actors?
 4 Q. Yes.
 5 MR. WHITE: Objection, vague, ambiguous.
 6 What do you mean by natural actors?
 7 BY MR. LUCHENITSER:
 8 Q. Under intelligent design theory, is it
 9 possible that space aliens could be the designers?
 10 MR. WHITE. I didn't hear what you said.
 11 under what?
 12 BY MR. LUCHENITSER:
 13 Q. Under intelligent design theory, is it
 14 possible that space aliens could be the designers?
 15 A. Sure.
 16 Q. Is it possible that time traveling humans
 17 could be designers?
 18 A. I don't know. I mean, that's
 19 speculation. I don't know. I mean, that's asking
 20 me to speculate on time travel, which is a
 21 hypothetical situation, and so I don't think it is
 22 really pertinent to my contribution or expertise.
 23 Q. Has any work been done within intelligent
 24 design theory relating to the issue of who the
 25 designer is?

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1 A. Not to my knowledge
 2 Q. Does intelligent design theory hold that
 3 there is only one designer or is it -- can it be
 4 consistent with intelligent design theory that there
 5 might be multiple designers?
 6 A. No, I mean -- again, you can just infer
 7 design from the public evidence and, you know -- I
 8 mean, we have multiple engineers that work in
 9 consortia to produce machines today, who is to say
 10 it is not true in the biological world? I don't
 11 know
 12 Q. And under intelligent design theory, is
 13 it possible that the designers are -- that there
 14 might be multiple competing designers?
 15 A. I don't know. I don't know what you mean
 16 by in terms of competing designers.
 17 Q. As opposed to designers who are working
 18 together with each other, designers who are trying
 19 to come up with life forms that end up competing or
 20 opposing each other?
 21 MR. WHITE: Objection, calls for
 22 speculation.
 23 BY MR. LUCHENITSER:
 24 Q. Is that possible under your theory?
 25 A. Yes, I mean, that's speculative, and I

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1 relationship, but there are differences between 20
 2 to 30 percent novel DNA in all these major groups of
 3 bacteria. The question arises, where does that
 4 novelty come in
 5 Q. So does intelligent design theory contain
 6 any conclusions or assertions other than that
 7 neo-Darwinian theory doesn't adequately explain the
 8 development of life on earth and that an intelligent
 9 designer is responsible for the development of the
 10 life on earth?
 11 A. Yes, I mean that's the basic principle.
 12 is that -- you know, my professional opinion,
 13 natural selection, time, laws of chemistry and
 14 physics are inadequate to explain life as we know
 15 it. It has all the hallmarks of design
 16 You look at the genetic code, it is the
 17 most sophisticated information storage system in the
 18 universe as digital readout. If it is truly an
 19 arbitrary code, then there is no reason why triplets
 20 for each amino acid have that specific designation,
 21 yet recent computer analysis shows that it is the
 22 optimum code of all potential theoretical codes that
 23 would be formed by random chance to negate the
 24 effect of point mutations, which I find astounding
 25 Of the millions of combinations of

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1 terms of people that ascribe to intelligent design
 2 Q. [REDACTED]
 3 A. [REDACTED]
 4 [REDACTED]
 5 [REDACTED]
 6 [REDACTED]
 7 [REDACTED]
 8 [REDACTED]
 9 [REDACTED]
 10 Q. [REDACTED]
 11 A. [REDACTED]
 12 Q. [REDACTED]
 13 [REDACTED]
 14 [REDACTED]
 15 A. [REDACTED]
 16 [REDACTED]
 17 [REDACTED]
 18 [REDACTED]
 19 [REDACTED]
 20 Q. [REDACTED]
 21 [REDACTED]
 22 [REDACTED]
 23 MR. WHITE: Objection, speculation, lack
 24 of relevancy.
 25 THE WITNESS: [REDACTED]

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1 triplets, you know, for the entire 20 amino acids
 2 that it is coding for, we find, by empirical
 3 analysis, that the genetic code is optimized to
 4 minimize the effects of base changes in that code.
 5 Now, that causes me to pause and wonder
 6 it causes my colleagues to pause and wonder how is
 7 nature so lucky on random chance? You know, that
 8 this frozen accident, Francis Crick refers to it as
 9 the genetic code, is mind boggling. So --
 10 Q. Uh-huh. Let me just go back, though.
 11 Do you have a scientific opinion on
 12 whether anything above complex molecular systems
 13 were designed? By that I mean, do you have a
 14 scientific opinion as to whether any complex animal
 15 species were designed as opposed to just the
 16 microscopic complex biological systems?
 17 A. No, no. Again, it goes back to this
 18 question of where is the designer intervening in
 19 this process? And, you know, I don't know. I mean,
 20 that's speculation
 21 Q. Is there any kind of consensus in the
 22 intelligent design on that issue?
 23 A. You have people from the entire spectrum
 24 from theistic evolutionists all the way up to
 25 six-day creationists. It is a pretty broad tent in

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1 [REDACTED]
 2 BY MR. LUCHENITZER
 3 Q. Again, I'll give another hypothetical.
 4 If students in the Dover School District were taught
 5 that the earth's history can compress into a
 6 framework of several thousand years, would they be
 7 misled about scientific knowledge?
 8 A. It's inconsistent with the present body
 9 interpretation, okay?
 10 Q. What is your belief on about how long ago
 11 life first appeared on earth?
 12 A. Well, from the fossil record you have
 13 fossil bacteria that appear at 3.8 billion years,
 14 somewhere around that time period.
 15 Q. And what is your opinion on how long ago
 16 the first multi-cellular animals on earth appeared?
 17 A. I'm not a paleontologist, I don't know
 18 what the time frame is, but it's a significant
 19 period afterwards from the first appearance of
 20 prokaryotes.
 21 Q. Do you have any opinion or knowledge as
 22 to how long ago the first land dwelling animals
 23 appeared on earth?
 24 A. Again, that's changed, from my
 25 experience, over time, so I don't -- I don't fix a

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1 specific time period. Again, it's not my area of
 2 expertise.
 3 Q. Do you know what the consensus is in the
 4 field of paleontology on that?
 5 A. I have read it, but I don't recall a
 6 specific number, but I don't have any problem with
 7 it.
 8 Q. Would 450 million years ago sound right?
 9 A. Sure.
 10 Q. You don't have any reason to disagree
 11 with that consensus?
 12 A. No.
 13 MR. WHITE: I'll object to this line of
 14 questioning. He said this is all outside of his
 15 area of expertise.

16 BY MR. LUCHENITZER

17 Q. [REDACTED]
 18 [REDACTED]
 19 [REDACTED]
 20 [REDACTED]
 21 A. [REDACTED]
 22 [REDACTED]
 23 [REDACTED]
 24 [REDACTED]
 25 [REDACTED]

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1 It goes back to the question that I have
 2 covered before, what is the capacity to change for
 3 any organism? That's an unknown at this point. How
 4 did these first organisms appear? You know, what is
 5 the mechanism whereby natural law can produce a
 6 replicating organism? I mean, that again is an
 7 unknown quantity.
 8 We know that the smallest free-living
 9 organisms on this planet, the micro plasma, have on
 10 the order of 300 to 350 genes, okay? So you've got
 11 to have at least that amount of information before
 12 you can replicate life that we know it at present.
 13 That's a lot of information required.
 14 Now, is just natural phenomena sufficient
 15 to produce that? I'm unwilling to say. From my
 16 professional experience, no. Whether you have 10
 17 organisms, a hundred organisms, primordial organisms
 18 appearing de novo, or one, I mean, you know, it is
 19 an event that is on the range of the miraculous,
 20 regardless of whether you still believe it is by
 21 natural process or a designer, okay?
 22 So am I making myself clear?
 23 Q. I'm not sure. It sounds like you are
 24 saying -- at least it's your personal opinion, based
 25 on the scientific understanding that you have, is

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1 [REDACTED] And
 2 [REDACTED]
 3 [REDACTED]
 4 [REDACTED]
 5 Q. I think before we talked a little bit
 6 about the concept of a common ancestry or common
 7 decent, and let me try to define common ancestry or
 8 decent as not necessarily that life descended from
 9 one cell that appeared three or four billion years
 10 ago, but that all life today developed from one or a
 11 few microorganisms that existed several billion
 12 years ago. So let's put aside the question whether
 13 it was one or several or a bunch of different
 14 ones. Defined broadly in that sense, do
 15 you accept the concept of common ancestry or common
 16 decent?
 17 A. I think it is highly speculative for
 18 anybody to make an assertion along those lines based
 19 on our knowledge, okay? This is looking at
 20 historically -- let me put it this way. The
 21 empirical science of nutrition can't figure out if
 22 butter or margarine is better for us, yet at the
 23 same time we make definitive statements that life
 24 arose from primitive ancestral organisms on this
 25 planet.

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1 that you would not accept the proposition of common
 2 ancestry or common decent as I have broadly defined
 3 it?
 4 A. Okay, look at -- I am trying to think. I
 5 want to quote a couple of things from my report
 6 directly so it's in the record. From Carl Woese,
 7 who is a leading --
 8 MR. WHITE. Just for me to clarify, are
 9 you talking Exhibit 1? You are quoting from page
 10 six, correct?
 11 THE WITNESS. Yes, at the top of the
 12 page.
 13 So this is in the peer-reviewed
 14 literature, this is a prominent evolutionary
 15 biologist, and looking at what you are talking about
 16 in terms of the origin of life.
 17 He says, "The creation of the enormous
 18 amount of and degree of novelty needed to bring
 19 forth modern cells is by no means a matter of waving
 20 the usual wand of variation and selection. What was
 21 there, what proteins were there to vary in the
 22 beginning? Did all proteins evolve from one
 23 aboriginal protein to begin with? If you
 24 extrapolate that all organisms evolved from one
 25 single organism to begin with? Hardly likely!

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 1 Q Are there people within the intelligent
 2 design community who would disagree with that
 3 conclusion?
 4 A Not that I'm aware of.
 5 Q What aspects of biology do you think
 6 natural selection can explain it?
 7 A Oh, I mean, that's the routine tool that
 8 we use in the laboratory in terms of genetics and
 9 putting selective pressure on organisms and looking
 10 for modifications.
 11 Q Do you think that natural selection can
 12 explain micro evolution?
 13 A For sure, no problem.
 14 Q How would you -- or how do you
 15 distinguish between aspects of biology that natural
 16 selection can explain and those that it can't?
 17 A Again, it comes back to the question of
 18 what are the limits of change of an organism.
 19 Q Do you have an opinion whether natural
 20 selection and random mutation can produce new genes
 21 with new functions?
 22 A They can take existing information that
 23 can be modified to produce similar, and over time,
 24 some different properties. In other words, you can
 25 expose an organism to a man made compound that has

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 1 Q That seems pretty close to what I have
 2 down here, but I will just read you back what I have
 3 here, which I believe is the actual definition. It
 4 is a quote.
 5 "A well substantiated explanation of some
 6 aspect of the natural world that can incorporate
 7 facts, laws, inferences, and tested hypotheses."
 8 A Sure.
 9 Q Do you accept that as a valid definition
 10 of a valid scientific theory?
 11 A Yes, I do.
 12 Q And under that definition does
 13 intelligent design qualify as a scientific theory?
 14 A Yes.
 15 Q I'm going to read you a definition from a
 16 Ken Miller's Biology Book of Science.
 17 "First, science deals only with the
 18 natural world; second, scientists collect and
 19 organize information in a careful, orderly way,
 20 looking for patterns and connections between events;
 21 third, scientists propose explanations that can be
 22 tested by examining evidence."
 23 Would you agree with that definition?
 24 A Sure, it's right out of his biology
 25 textbook. And in fact, you know, I was asked to

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 1 carbon and nitrogen that has a potential use for
 2 energy, okay, and cycling into other components of
 3 the cell
 4 It may be recalcitrant, you know, so it
 5 it has never appeared on earth before. There are
 6 organisms that aren't specifically capable of
 7 breaking down and utilizing that compound, but over
 8 time, if you put stress on the organism, you can
 9 develop, modify enzymatic pathways that will evolve
 10 and use and break open, say, a chlorinated biphenyl,
 11 or something like that. So I have no problem with
 12 that
 13 Q How would you define science?
 14 A Science is the discipline of accumulating
 15 knowledge of the natural world.
 16 Q Are you familiar with the National
 17 Academy of Science's definition of scientific
 18 theory?
 19 A Yes.
 20 Q Would you know it off the top of your
 21 head?
 22 A I could paraphrase it. It would be a
 23 statement or a set of statements that explain a set
 24 of facts or phenomena through, you know,
 25 experimentation or observation.

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 1 review a biology curriculum for a private Christian
 2 school and they had a -- I don't know where their
 3 curriculum was from, but it was creationist. I
 4 said, "Use Ken Miller's book, augment it with Pandas
 5 and People if you want a counter-argument. But I
 6 have no problem.
 7 If you read further in that paragraph he
 8 says, "Theory are subject to change as new
 9 information is gathered and compared to the model of
 10 any theoretical explanation."
 11 That's a history of science, is
 12 revolutions in thought. You accumulate more
 13 information or you look at it in light of new
 14 circumstances and you go back and you modify
 15 theories to be consistent with observed fact or
 16 experiments.
 17 Q Can you tell me what the difference is
 18 between a hypothesis and a scientific theory?
 19 A Well, they can be used interchangeably,
 20 and they are all the time from a working
 21 perspective.
 22 I have a student that will come in and
 23 say, "Hey, I have a theory that this gene is
 24 participating in knocking out this function in a
 25 white blood cell." Fine. You know, that's really a

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1 hypothesis.

2 A hypothesis is an idea that predicts
3 certain outcomes that are testable experimentally.
4 all right? Then once you carry out the experiment
5 or a set of experiments, is it consistent with your
6 original hypothesis? So it can be something as
7 simple as an idea or a conjecture. First, as a
8 theory, which is more formally, you know -- and
9 according to the National Academy is based on well
10 documented experimental evidence that has been
11 accumulated over time and subject to experimental
12 verification.

13 Q. And then it is your opinion that
14 intelligent design is a scientific theory; is that
15 correct?

16 A. Yes.

17 Q. [REDACTED]
18 [REDACTED]
19 [REDACTED]
20 [REDACTED]
21 [REDACTED]
22 [REDACTED]
23 [REDACTED]
24 [REDACTED]
25 A. Looking at the public evidence, okay, in

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1 data. But it changed our view of the universe.

2 okay?

3 And in the same way I think we are at the
4 stages where we are looking at the natural record
5 and saying, based on inference, well substantiated
6 records from paleontology, from molecular biology,
7 from biochemistry, from genetics, that there is a
8 limitation to our current theory of natural
9 selection, that we infer intelligence. And that's
10 going to contribute to biological systems

11 It will have an impact. Just because
12 Einstein had a metaphysical problem with the
13 predictions of his equations, and he even modified
14 those equations to remove the fact that the universe
15 had a point in time beginning in history, I think
16 impeded thought, okay?

17 And this is a question that I have in
18 terms of our present state of biology. Intelligent
19 design has been characterized as a religious
20 position, a non-scientific position, because it goes
21 against the current consensus.

22 Now, I think as a scientist there are
23 legitimate claims, legitimate questions, legitimate
24 criticisms that we are bringing out on the table
25 and have to be addressed by our current

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1 terms of the natural record, can you explain it
2 based on inference to an intelligent designer? It
3 is a new theory and it is going to be modified over
4 time, and this is the way science works

5 Let me give you an example. Until the
6 1930s the consensus viewpoint in science was that we
7 had a static universe, okay? And then Einstein
8 comes up with his equations and relativity and is
9 bothered by the fact that when you run these
10 equations through, it looks like the universe had a
11 point in time and history where it began

12 Now, this was contrary to the accepted
13 consensus view of all scientists at the time period
14 and he didn't like the implications, from my
15 understanding of historical science, because of the
16 metaphysics

17 Then you have independent observations of
18 Hubble and other astrophysicists that show you have
19 red shifts, you have got galaxies that appear to be
20 moving away, and you have a real monumental change
21 in our understanding of the universe in terms of
22 what was accepted theoretically. And then as new
23 data came in, it took time, it took argument, it
24 took reformulating how we could do experiments to
25 address this inference based on a minimal set of

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1 understanding of neo-Darwinism. We are being
2 marginalized as a non-scientific approach just as
3 people had problems with Einstein's predictions or
4 Hubble's predictions because of the metaphysical
5 implications of how we viewed the universe and our
6 position in it.

7 People object to my position because of
8 the same -- for the same reasons. Nonetheless, the
9 data will drive us in that direction, the science
10 will drive us in that direction. We may be wrong,
11 okay? We are going to have to stand the test of
12 criticism and the dialogue and, you know, we may be
13 wrong, that's a possibility. But I think our model
14 is consistent with the public evidence.

15 Another critical aspect to this debate is
16 that if the other side is wrong in part, and I'm not
17 saying that they are wrong in total, but in part, if
18 there are positions that neo-Darwinism draws or
19 inferences that it draws that are incorrect, that
20 could have an impeding effect on the advancement of
21 science, just like Einstein's reluctance to accept
22 that there was a point time start in the universe
23 That opened up entire new vistas in terms
24 of looking at the universe if it proposed at that
25 point unforeseen experiments that could be done to

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1 verify it.

2 so are you getting my point?

3 [REDACTED]
 4 [REDACTED]
 5 [REDACTED]
 6 [REDACTED]
 7 [REDACTED]
 8 [REDACTED]
 9 [REDACTED]
 10 [REDACTED]

11 Q. You say it's in its infancy, how do you
 12 -- what is the basis for saying it has risen above
 13 all of the hypotheses and up to the level of a
 14 scientific theory?

15 A. Because we are looking at the natural
 16 world and we are seeing information storage systems,
 17 coded systems that in any other context we would
 18 ascribe an intelligence behind it. You look at the
 19 genetic code -- I mentioned Bill Gates is envious of
 20 the ability, you know, the mechanism whereby that
 21 information is stored. It's the most efficient
 22 storage system in the universe. It has true
 23 characters by which information is extracted from
 24 it. It's not unlike an alphabet, it's not unlike a
 25 musical scale, it's not unlike mathematical symbols.

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1 answer from before.

2 MR. LUCHENITSER. I'm comfortable with
 3 the answer, I don't need anything more on that.

4 THE WITNESS. The last bit of the
 5 sentence. So I'll continue with the statement, "The
 6 molecular machines in even the simplest of organisms
 7 produced by evolution dwarf the sophistication and
 8 subtlety of machines produced by man, essentially.
 9 I mean, that's a paraphrase.

10 BY MR. LUCHENITSER:

11 Q. Does the science only consider natural
 12 causes?

13 A. Not necessarily, okay? You always look
 14 for natural explanations first. I mean, that is
 15 consistent. But I mean, there are sciences that
 16 look for signs of intelligence, whether it is the
 17 SETI project, if you are a forensic scientist, if
 18 you are an archeologist, you know? You are looking
 19 at natural products and asking is there an
 20 intelligence involved in what you are seeing.

21 Q. Does science ever consider supernatural?

22 [REDACTED]
 23 A. [REDACTED]
 24 [REDACTED]
 25 [REDACTED]

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1 okay? It's a true code.

2 Our experience tells us whenever we find
 3 a code there is a coder. In the same context, we
 4 look at subcellular machines, a new view of our
 5 understanding of the cell that is within the last 40
 6 years. We didn't know about the bacterial flagellum
 7 and how sophisticated it was, we didn't know about
 8 DNA replication and their profound efficiency and
 9 editing functions.

10 We have to look at this new data and say
 11 is natural selection up to the task to produce this
 12 level of complexity and specification?

13 Put it this way, on the Genome To Life
 14 web site that was produced by the Department of
 15 Energy several years ago, they make the statement in
 16 the introduction that is to be read by the public
 17 that, "The molecular machines we find in the
 18 simplest of organisms produced by evolution dwarf
 19 the engineering feats of the twentieth century."

20 Natural laws, undirected, unintelligent,
 21 un-in-purpose, un-forward looking can produce
 22 machines more sophisticated than the entire
 23 community of intelligent design engineers.

24 (Off the record.)

25 MR. WHITE: He was going to finish his

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1 [REDACTED]
 2 Q. [REDACTED]
 3 [REDACTED]
 4 [REDACTED]
 5 A. [REDACTED]
 6 [REDACTED]
 7 [REDACTED]
 8 [REDACTED]
 9 [REDACTED]
 10 [REDACTED]

11 Q. Do you disagree with the current
 12 definition of science that does not -- that's too
 13 many negatives.

14 I think you agree that the current
 15 definition of science does not consider supernatural
 16 causes. Do you disagree that that should be the
 17 correct definition?

18 A. It's a qualified disagreement, especially
 19 in this debate. If the science is pointing you to
 20 an intelligent cause, then you have to go where the
 21 data leads. If you are limiting your
 22 interpretation, your interpretations, or what you
 23 will accept as interpretations, it has consequences.
 24 And I'm the first person to say we look
 25 for natural causes, natural explanations first, all

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1 right? But I'm not opposed to looking at the data
 2 any more than a forensic pathologist is and saying,
 3 you know, is it a natural death or was this a
 4 designed death, is this a murder?
 5 Is natural law sufficient to describe
 6 life forms on this planet or not? It's a valid
 7 question. If it is insufficient, then that implies
 8 that there may be an intelligence behind it, or in a
 9 definitional term, a supernatural cause. But I'm
 10 not saying supernatural in the way that you would
 11 imply superstition or a specific god, et cetera. It
 12 is just above the natural explanation.

13 Q. Would you agree with the proposition that
 14 the natural law explanation is not sufficient to go
 15 beyond the natural law explanation to an beyond
 16 the natural law explanation?
 17 A. It would be a natural law explanation, but it's
 18 not a natural law explanation, it's a natural law
 19 explanation, it's a natural law explanation, it's a
 20 natural law explanation, it's a natural law
 21 explanation, it's a natural law explanation, it's a
 22 natural law explanation, it's a natural law
 23 explanation, it's a natural law explanation, it's a
 24 natural law explanation, it's a natural law
 25 natural law explanation, it's a natural law

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1 there. We don't rule them out, we don't know they
 2 haven't visited this planet. So that is, by
 3 definition, supernatural, and there are a lot of
 4 scientists that agree.
 5 Francis Crick looked at the common
 6 evidence in biology and said life could not arise on
 7 this planet de novo, it was seeded by some
 8 extraterrestrial source, in formulating his theory
 9 of Pan Sperma, all right? Nobel laureate, looking
 10 at the evidence, saying that there is some
 11 supernatural event in terms of our understanding of
 12 natural events on this planet, that solar winds blew
 13 in some primitive organism or someone visited this
 14 planet and seeded life. I mean, that's pretty far
 15 out, but it is one of the hypotheses.

16 Q. Let me draw your attention to the top of
 17 page 10 of your report, all the way to the top. You
 18 say, "The real problem may not be determining the
 19 best explanation of the origin of the flagellum.
 20 Rather it may be amending the methodological
 21 strictures that prevent consideration of the most
 22 natural and rational conclusion."

23 Can you tell me what you meant by
 24 amending the methodological strictures?

25 A. In other words, it is limiting our

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1 [REDACTED]
 2 A. [REDACTED]
 3 [REDACTED]
 4 [REDACTED]
 5 [REDACTED]
 6 [REDACTED]
 7 [REDACTED]
 8 [REDACTED]
 9 I mean, [REDACTED]
 10 looking at the [REDACTED] data and saying, "Is there
 11 [REDACTED]
 12 [REDACTED]
 13 [REDACTED]
 14 [REDACTED]

15 Q. But there you are talking about looking
 16 for extraterrestrial life, so it still seems that
 17 you are looking at natural actors as opposed to the
 18 supernatural actor. Now with respect to intelligent
 19 design theory, doesn't --
 20 A. Intelligent design theory doesn't rule
 21 out the fact that those natural actors may have a
 22 super intelligence that participated in development
 23 of life on this planet, okay? And we don't know
 24 that they exist so it is supernatural to our
 25 experience. We don't know that there are aliens out

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1 interpretation of natural phenomena. It has
 2 consequences. If you are only going to accept the
 3 laws of physics and chemistry, time and chance, as
 4 an explanation of life on this planet, how it arose,
 5 how it diversified, that could have -- that could be
 6 a methodological stricture that has consequences in
 7 terms of the progress of science.

8 Going back to Einstein's experience, he
 9 came up with a radical new interpretation of the
 10 universe that had philosophical, religious,
 11 metaphysical implications. Whatever you want to
 12 call it, he didn't like it, all right? And he
 13 essentially fudged his equations to eliminate that
 14 interpretation that impeded science.

15 All I'm saying is that I think in
 16 biological systems we infer, in a consensus
 17 viewpoint, that natural cause and effect is
 18 sufficient to explain what we see, and I disagree
 19 with that. It has the same types of implications
 20 that were faced by the big bang theory, and that's a
 21 legitimate area of exploration scientifically.

22 Q. On page one you say, kind of in the
 23 middle of the last full paragraph on the page, you
 24 refer to neo-Darwinism as the generally accepted
 25 mechanism. So you would agree that evolution is a

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1 THE DEPOSITION OF SCOTT MINNICH, Ph.D.

2 was taken on behalf of the Plaintiffs on this, the
 3 26th day of May 2005, at University of Idaho, Life
 4 Sciences Building, Room 144, Moscow, Idaho, before
 5 M & M Court Reporting Service, Inc., by Neil Cooley,
 6 Court Reporter and Notary Public within and for the
 7 State of Idaho, to be used in an action pending in
 8 the United States District Court for the Middle
 9 District of Pennsylvania, said cause being Civil
 10 Action No. 4:04-CV-2688 in said court.

11 THEREUPON, the following proceedings were
 12 adduced, to wit:

13 ~~SCOTT MINNICH, Ph.D.~~
 14 ~~a witness having been first duly sworn to tell the~~
 15 ~~truth, the whole truth, and nothing but the truth,~~
 16 ~~relating to said cause, deposes and says:~~

17 EXAMINATION

18 QUESTIONS BY MR. LUCHENITSEK

19 Q Dr. Minnich, could you please state your
 20 name for the record?

21 A Scott Arthur Minnich

22 Q And have you had your deposition taken
 23 before?

24 A Never.

25 Q I'm just going to give you some standard

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1 Q. Let me pull out your expert report, and

2 we are going to mark that as Exhibit 1.

3 (Deposition Exhibit No. 1 marked for
 4 identification.)

5 BY MR. LUCHENITSEK:

6 Q: We have marked as Exhibit 1 the expert
 7 report of Scott Minnich. And if you could flip to
 8 Exhibit A to Exhibit 1, which is the biographical
 9 sketch in the back, please, does that Exhibit A
 10 correctly reflect your educational and employment
 11 history?

12 A. It does.

13 Q. And is everything in there still correct
 14 or current or has something changed since you
 15 submitted it?

16 A. No, it is still current.

17 Q. What were you asked to give an opinion
 18 about by the defendants in this case?

19 A. The theory of intelligent design and how
 20 it fits into this case in Dover, Pennsylvania.

21 (Off the record.)

22 MR. LUCHENITSEK: Back on the record.

23 BY MR. LUCHENITSEK:

24 Q. Were you asked to give an opinion about
 25 anything else?

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1 A. No.

2 Q. And can you tell me what the principal
 3 opinions you have in this case are?

4 A. That intelligent design is a viable
 5 scientific theory.

6 Q. Anything else?

7 A. No, I mean in terms of my expertise in
 8 this case, you know, it is whether or not
 9 intelligent design is a competing theory in part to
 10 the current consensus in biology.

11 Q. When you say intelligent design is a
 12 viable scientific theory, can you explain what you
 13 mean by viable?

14 A. In other words, it is looking at the
 15 public evidence and interpreting that evidence in
 16 the sense that the design we see in nature is real
 17 design, not just apparent design, which most of my
 18 colleagues hold the latter view.

19 Q. Uh-huh, so when you use the word viable,
 20 do you mean it is real?

21 A. It's real, it's real, okay? It is
 22 science, it is not a religious position. It has
 23 metaphysical implications, like evolution does, but
 24 that is incidental, secondary to its explanatory
 25 power when we look at the facts and experiences that

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1 Instructions. Please answer all the questions

2 orally. Please don't nod your head or say uh-huh or

3 huh-uh, because then the court reporter won't be

4 able to take down your answer accurately.

5 If you do not hear a question or don't

6 understand a question, please tell me. Please wait

7 until I have finished asking my question before you

8 begin your answer. And if you realize that an

9 earlier answer you gave was inaccurate or

10 incomplete, please say that you would like to

11 correct a former answer and I will give an

12 opportunity to do so.

13 And if your attorney objects to one of my

14 questions, you are still required to answer the

15 question unless your attorney instructs you not to

16 answer.

17 And do you understand the instructions I

18 have given you?

19 A. I do.

20 Q. And do you understand that you under oath

21 and are required to tell the truth?

22 Q. I do.

23 Q. Is it correct that you are serving as an

24 expert for the defendants in this case?

25 A. Yes.

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1 we see in the natural world.

2 Q. What are the metaphysical implications
3 that intelligent design has?

4 A. That there is design behind it, that
5 there is an intelligence in part responsible for
6 what we see.

7 Q. And let me ask you, why do you use the
8 word metaphysical?

9 A. Well, it is philosophical, metaphysical.
10 I mean, in that realm it doesn't require a religious
11 position, you know? It can be more of -- a person
12 can hold the view of intelligent design as being
13 real and believe in the God of Espinoza or Einstein,
14 the God of the philosophers, not of a traditional
15 God that we think of in the context of traditional
16 religions.

17 Q. Does your report identify all the subject
18 matter that you are going to testify about at trial?

19 MR. WHITE: I have to object because I
20 couldn't hear you.

21 BY MR. LUCHENITZER:

22 Q. I'm sorry, does your expert report

23 identify all the subject matter that you will

24 testify about at trial?

25 A. That's an absolute statement, and being a

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1 organisms that cause disease.

2 Q. Has that area been the focus of your
3 professional research?

4 A. Yes.

5 MR. WHITE: Object as far as what time
6 frame you are talking about for his professional
7 research.

8 THE WITNESS: Yes, currently, I have had
9 other experiences, too. I have been in diagnostics,
10 I have been in developmental biology, and -- I'm
11 trying to think in terms of just how you quoted
12 this, basic molecular biology, molecular genetics.
13 As an example, the controversy about
14 genetically engineered foods and BT toxins. I don't
15 know whether you are familiar with this at all,
16 bacillus thuringiensis toxin. This has been
17 incorporated into agricultural plants and has been
18 controversial because of the ethical concerns about
19 introducing or modifying plant genomes.

20 But that bacillus toxin gene I cloned as
21 a post-doc, and we gave it to Monsanto 20 years ago.

22 So occasionally I am called to -- in
23 fact, four or five years ago I had my research
24 notebooks subpoenaed because of a patent lawsuit
25 involved in who owned the rights to that. That was

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1 between Monsanto and some other company in terms of
2 who had the right to that gene.

3 Q. Would you consider yourself an expert in
4 evolutionary biology?

5 A. That's a difficult question and I want to
6 qualify it, because I was challenged here at the
7 University of Idaho several years ago when Robert
8 Pennock came and gave a seminar. And he knew my
9 position and he challenged me in the audience with
10 respect to, "How can you, as a practicing
11 contributing scientist, hold the position that is
12 contrary to the very foundation of your discipline?"
13 Okay? This is in front of all of my colleagues and
14 students in a formal departmental seminar.
15 And I responded that, "That's an
16 interesting question, and now that you have raised
17 it, I'm sure a lot of people are interested in my
18 response."

19 What I find interesting in my own
20 experience, and that of colleagues in this
21 department -- and we are the most highly funded and
22 I think the most successful in getting extramural
23 funding, publication in peer-reviewed journals, we
24 have several new faculty so I don't want to make an
25 absolute statement, but, you know, the past couple

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1 scientist I always hesitate. But this is -- in

2 terms of my own research and training, it is

3 reflected in this report.

4 Q. Do you intend to express any opinions in
5 this case that have not been included in your
6 report?

7 A. If I am asked a question that is not
8 directly applicable to this report, I may choose to
9 respond or not if I have knowledge in the area. No,
10 this isn't a complete tome of all the knowledge that

11 I have.

12 Q. Do you have any plans to supplement your
13 report in any way?

14 A. No, not at present.

15 Q. Do you consider yourself an expert on any
16 issues relevant to this case?

17 A. As they bring to bear on examples that
18 are being disputed by both camps, you know, the area
19 of irreducible complexity of the bacterial
20 flagellum, molecular machines, genetics,
21 microbiology.

22 Q. What is -- do you have an area of
23 specialty within the discipline of biology?

24 A. I do. I am a microbial geneticist, focused
25 on an area we refer to as microbial pathogenesis.

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- 1 intelligent design that are different from the
- 2 definition you gave in your report?
- 3 A. I think my written statement is
- 4 consistent with my colleagues in terms of -- you
- 5 know, I think there are philosophers of science in
- 6 the intelligence design arena that are more
- 7 articulate in terms of the philosophical
- 8 implications of this.
- 9 Q. How would you define creationism?
- 10 A. Creationism, which I think is very
- 11 different than intelligent design, uses biblical
- 12 reference by which you judge science. In the
- 13 traditional sense, scientific creationism held to a
- 14 literal interpretation of Genesis and thought that
- 15 that was an embodiment of truth and that science
- 16 should be filtered through that viewpoint.
- 17 I disagree with that stand. In fact, I
- 18 was never an active participant in scientific
- 19 creationism as it went through the Louisiana and
- 20 Arkansas debates, I thought it was out of balance.
- 21 Q. Is there a difference between creation
- 22 science and creationism?
- 23 A. Well, in terms of definitions, yes, I
- 24 think it is subtle. Creationism, again I think in
- 25 the traditional sense as it is used in the public

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- 1 we all agree is there real or apparent? Okay? It
- 2 is a valid question and I think we should be
- 3 addressing it at a scientific level in our
- 4 inquiries.
- 5 It is that simple, okay? It doesn't have
- 6 any basis of going further than looking or devising
- 7 theories or hypotheses to look at how you detect
- 8 design. Our record of life on this planet, does it
- 9 fit with an intelligent agent or, again, is natural
- 10 law, in terms of physics and chemistry, of what we
- 11 know of genetics, sufficient to produce the
- 12 diversity that we see in life?
- 13 And you end right there, yes or no. It
- 14 is an interesting question, it is a valid question,
- 15 and it should be addressed. I mean, and that's why
- 16 we are here, you know? That's what Ken Miller is
- 17 writing about. Robert Pennock, he is asking the
- 18 question, can natural law come up with de novo
- 19 information?
- 20 Q. Does intelligent design theory reach any
- 21 conclusions that are different from the conclusions
- 22 reached by creation science?
- 23 MR. WHITE: Objection as to vagueness,
- 24 ambiguity.
- 25 BY MR. LUCHENITSER:

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- 1 arena, implies a literal interpretation of Genesis.
- 2 Scientific creationism then tries to look at the
- 3 body of scientific understanding and fit it
- 4 consistently with that viewpoint of biblical
- 5 interpretation.
- 6 Q. Is teaching of creationism or creation
- 7 science -- is the teaching of that, that forms of
- 8 life began abruptly -- begin abruptly in their basic
- 9 types, for example, fish with fins and scales, birds
- 10 with feathers and beaks and wings?
- 11 A. That's -- repeat the question because I
- 12 want to make sure I understand it.
- 13 Q. Does creationism or creation science
- 14 teach that forms of life began abruptly in their
- 15 basic types? For example, fish began with fins and
- 16 scales and birds began with feathers, beaks and
- 17 wings?
- 18 A. That is my understanding, yes.
- 19 Q. What is the difference between
- 20 intelligent design theory and creation science?
- 21 A. Intelligent design theory isn't dependent
- 22 upon any formal religious writing or revelation in
- 23 which you are trying to match the natural world to
- 24 show consistency. It is simply looking at the
- 25 science and asking the question: is the design that

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- 1 Q. You can go ahead and answer.
- 2 MR. WHITE: If you understand the
- 3 question.
- 4 THE WITNESS: Repeat it one more time, or
- 5 let me ask a question to make sure I understand it.
- 6 Does creation science and intelligent
- 7 design both come to the same conclusion, is that
- 8 what you are asking?
- 9 BY MR. LUCHENITSER:
- 10 Q. Let just ask the question, does
- 11 intelligent design theory reach any conclusions that
- 12 are different from the conclusions reached by
- 13 creation science?
- 14 A. Oh, for sure.
- 15 Q. What are the differences? What different
- 16 conclusions does -- what conclusions does
- 17 intelligent design theory reach that are --
- 18 A. Well, creation science, I think, is
- 19 really an area of apologetics, religious
- 20 apologetics. They want the science to validate the
- 21 scriptural content of Genesis, okay? And
- 22 intelligent design isn't going to go that far. You
- 23 can say that -- looking at the data, what we know in
- 24 terms of chemistry and physics, genetics and natural
- 25 selection, that there is a real design, and you stop

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1 there.

2 Q. Can you tell me what theistic evolution

3 is?

4 A. Theistic evolution is the position, as I

5 understand it, that there is a designer or creator

6 that designed the universe, started the clock going,

7 designed the laws of physics and chemistry, and that

8 life, through those laws, emerged and has evolved.

9 But it is more of an impersonal activity. In other

10 words, the machine was started and is removed from

11 that machine, so that organisms do evolve in terms

12 of our common consensus

13 Q. Can someone who believes in theistic

14 evolution also believe that God in some way guides

15 the progress of evolution?

16 A. Sure. I mean I think you have the entire

17 spectrum of people that believe in a designer or

18 creator in terms of his participation in the world

19 as we know it

20 Q. What is the difference between theistic

21 evolution and intelligent design theory?

22 A. Theistic evolutionists, I think, agree

23 that given, for instance, the planet earth in its

24 early stages of development had incorporated in it

25 all the necessary components for the emergence of

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1 development of life forms on the planet earth, does

2 intelligent design make any other scientific claims?

3 MR. WHITE: Objection, it is misleading.

4 THE WITNESS: I'm not quite sure what you

5 mean in terms of other scientific claims. Give me

6 an example. You know, is it going to tell me that

7 butter is better for me than margarine? I mean --

8 BY MR. LUCHENITSER:

9 Q. I guess let me try to see if I can

10 rephrase it.

11 What is the scientific content of an

12 intelligent designer, other than the ultimate

13 assertion that there is a designer or designers?

14 A. That's the main principle, okay?

15 Q. Is there anything else?

16 A. I would have to think about it in terms

17 of the question. So if we proceed, I will come back

18 to that.

19 Q. Do you have an opinion, a personal

20 opinion, as to who or what the intelligent designer

21 is?

22 MR. WHITE: Objection as to are you

23 asking for his personal opinion or his opinion as a

24 scientist?

25 BY MR. LUCHENITSER:

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1 Q. Do you have a scientific opinion as to

2 who the intelligent designer is?

3 A. No.

4 Q. Do you have a personal opinion?

5 A. Yes, I do.

6 Q. You do. What is your personal opinion?

7 MR. WHITE: Objection as to relevancy.

8 Go ahead.

9 THE WITNESS: I want to make sure that

10 this is -- I mean, I have a problem in terms of

11 giving my opinion, but my experience, when asked

12 these questions, is that they are somewhat loaded.

13 In other words, in my discussion with Robert Pennock

14 when he was here and we were discussing type III

15 secretory systems and the flagellum, claims of

16 intelligent design, he then turned on me in this

17 public audience and said, "Who is the creator?"

18 And I said, "Well, I have an opinion, but

19 we are talking science, why do you want to bring

20 religion into the question?"

21 No. "Who is the creator? Tell us who the

22 creator is?"

23 And in part I think there is an attempt

24 to marginalize people in this area as

25 fundamentalists, you know, Christians that want to

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1 life and its subsequent diversity, that there is no

2 input from the designer from that point, okay?

3 So it is really consistent with the

4 Darwinian viewpoint that you just started it by an

5 intelligent agent or God and then everything

6 unfolds

7 Intelligent design sees a more active

8 part of a designer from the sense that from my own

9 perspective I look at the bacterial flagellum, it

10 has stators and rotors and propellers and u-joints.

11 It is battery powered, it looks like engines that

12 Mazda makes, in one sense, but it is much more

13 sophisticated because there is an algorithm or

14 program that directs its assembly from genetic

15 information and it regulates the timing of synthesis

16 and the position where it is assembled, that that is

17 a product of intelligence

18 And from my position you don't get these

19 machines by totally natural process. I mean, they

20 can change and evolve, I don't know at what level or

21 to what extent, but the prototypic or original

22 machine has all the hallmarks of design based on our

23 experience of machines that we manufacture

24 Q. Other than the ultimate claim that a

25 designer or designers were responsible for the

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1 get the bible back into the classroom, and that's
 2 invalid. But I am a Christian, that's my personal
 3 faith.
 4 And I also would like to state for the
 5 record that that is not my family's faith tradition.
 6 I was an agnostic, probably an atheist, and when I
 7 took a course in biology and was confronted with the
 8 design in the bacteriophage Lambda, it made me pause
 9 and think, is this the product of chance and
 10 necessity?
 11 Okay, so I am a Christian because of the
 12 data, not despite it.
 13 Q. So this experience led you to become a
 14 Christian?
 15 MR. WHITE: Objection as of "this
 16 experience."
 17 BY MR. LUCHENITSER:
 18 Q. The experience when you were studying
 19 this life form?
 20 A. No, I think it was a factor, you know, in
 21 my own personal journey, but I had no reason to --
 22 at the point until I started taking biology classes
 23 -- in fact, I was an English history major that took
 24 a general chemistry course that had a molecular
 25 biology component and was so fascinated by the

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1 A. Natural what? I didn't hear your --
 2 Q. Natural actors.
 3 A. Natural actors?
 4 Q. Yes.
 5 MR. WHITE: Objection, vague, ambiguous.
 6 What do you mean by natural actors?
 7 BY MR. LUCHENITSER:
 8 Q. Under intelligent design theory, is it
 9 possible that space aliens could be the designers?
 10 MR. WHITE: I didn't hear what you said.
 11 under what?
 12 BY MR. LUCHENITSER:
 13 Q. Under intelligent design theory, is it
 14 possible that space aliens could be the designers?
 15 A. Sure.
 16 Q. Is it possible that time traveling humans
 17 could be designers?
 18 A. I don't know. I mean, that's
 19 speculation. I don't know. I mean, that's asking
 20 me to speculate on time travel, which is a
 21 hypothetical situation, and so I don't think it is
 22 really pertinent to my contribution or expertise.
 23 Q. Has any work been done within intelligent
 24 design theory relating to the issue of who the
 25 designer is?

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1 information that I changed my major, because I was
 2 interested in the science, the beauty of the
 3 science, and the more I studied, it had
 4 implications.
 5 Q. This is when you were an undergraduate.
 6 did you say?
 7 A. Right.
 8 Q. So is it correct that your personal
 9 opinion is that the intelligent designer is the God
 10 of Christianity?
 11 A. Yes.
 12 Q. Is there a consensus within intelligent
 13 design theory as to who the designer is or what it
 14 is?
 15 A. No.
 16 Q. Does intelligent design theory make any
 17 claims as to who or what the designer is?
 18 A. No, in a formal sense it doesn't. It
 19 says you can infer design and therefore designer,
 20 but that's as far as the science goes.
 21 Q. Does intelligent design theory rule out
 22 any type of possible designers?
 23 Q. Not necessarily.
 24 Q. Does intelligent design theory rule out
 25 all possible and natural actors as designers?

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1 A. Not to my knowledge.
 2 Q. Does intelligent design theory hold that
 3 there is only one designer or is it -- can it be
 4 consistent with intelligent design theory that there
 5 might be multiple designers?
 6 A. No, I mean -- again, you can just infer
 7 design from the public evidence and, you know -- I
 8 mean, we have multiple engineers that work in
 9 consortia to produce machines today, who is to say
 10 it is not true in the biological world? I don't
 11 know.
 12 Q. And under intelligent design theory, is
 13 it possible that the designers are -- that there
 14 might be multiple competing designers?
 15 A. I don't know. I don't know what you mean
 16 by in terms of competing designers.
 17 Q. As opposed to designers who are working
 18 together with each other, designers who are trying
 19 to come up with life forms that end up competing or
 20 opposing each other?
 21 MR. WHITE: Objection, calls for
 22 speculation.
 23 BY MR. LUCHENITSER:
 24 Q. Is that possible under your theory?
 25 A. Yes, I mean, that's speculative, and I

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1 relationship, but there are differences between 20
2 to 30 percent novel DNA in all these major groups of
3 bacteria. The question arises, where does that
4 novelty come in

5 Q. So does intelligent design theory contain
6 any conclusions or assertions other than that
7 neo-Darwinian theory doesn't adequately explain the
8 development of life on earth and that an intelligent
9 designer is responsible for the development of the
10 life on earth?

11 A. Yes, I mean that's the basic principle
12 is that -- you know, my professional opinion.
13 natural selection, time, laws of chemistry and
14 physics are inadequate to explain life as we know
15 it. It has all the hallmarks of design

16 You look at the genetic code, it is the
17 most sophisticated information storage system in the
18 universe as digital readout. If it is truly an
19 arbitrary code, then there is no reason why triplets
20 for each amino acid have that specific designation.
21 yet recent computer analysis shows that it is the
22 optimum code of all potential theoretical codes that
23 would be formed by random chance to negate the
24 effect of point mutations, which I find astounding
25 Of the millions of combinations of

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1 terms of people that ascribe to intelligent design.

2 Q. How old do you think the universe is?
3 A. Well, the current, you know, consensus
4 was 20 billion years; although the COBE satellite
5 experiment measurements have reduced that to about
6 12.5 billion years in terms of the age of universe.
7 The earth, according to multiple scientific
8 independent analyses, is somewhere around 4.5
9 billion years old.

10 Q. Do you accept those concepts?

11 A. Yes.

12 Q. Does intelligent design theory accept
13 those beliefs about the age of the universe and the
14 age of the earth?

15 A. There is not a set consensus, okay?
16 Although I think it is a prominent position. But
17 there are both, I mean, from the camp you have your
18 old earthers and young earthers and both ascribing
19 to a designer.

20 Q. So are there some scientists within the
21 fields of intelligent design theory who believe that
22 earth is less than 10,000 years old?

23 MR. WHITE: Objection, speculation, lack
24 of relevancy.

25 THE WITNESS: Oh, I'm sure there are, you

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1 triplets, you know, for the entire 20 amino acids
2 that it is coding for, we find, by empirical
3 analysis, that the genetic code is optimized to
4 minimize the effects of base changes in that code.

5 Now, that causes me to pause and wonder
6 it causes my colleagues to pause and wonder how is
7 nature so lucky on random chance? You know, that
8 this frozen accident, Francis Crick refers to it as
9 the genetic code, is mind boggling. So --

10 Q. Uh-huh. Let me just go back, though.
11 Do you have a scientific opinion on
12 whether anything above complex molecular systems
13 were designed? By that I mean, do you have a
14 scientific opinion as to whether any complex animal
15 species were designed as opposed to just the
16 microscopic complex biological systems?

17 A. No, no. Again, it goes back to this
18 question of where is the designer intervening in
19 this process? And, you know, I don't know. I mean,
20 that's speculation.

21 Q. Is there any kind of consensus in the
22 intelligent design on that issue?

23 A. You have people from the entire spectrum,
24 from theistic evolutionists all the way up to
25 six-day creationists. It is a pretty broad tent it.

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1 know?

2 BY MR. LUCHENITZER:

3 Q. Again, I'll give another hypothetical
4 If students in the Dover School District were taught
5 that the earth's history can compress into a
6 framework of several thousand years, would they be
7 misled about scientific knowledge?

8 A. It's inconsistent with the present body
9 interpretation, okay?

10 Q. What is your belief on about how long ago
11 life first appeared on earth?

12 A. Well, from the fossil record you have
13 fossil bacteria that appear at 3.8 billion years,
14 somewhere around that time period.

15 Q. And what is your opinion on how long ago
16 the first multi-cellular animals on earth appeared?

17 A. I'm not a paleontologist, I don't know
18 what the time frame is, but it's a significant
19 period afterwards from the first appearance of
20 prokaryotes.

21 Q. Do you have any opinion or knowledge as
22 to how long ago the first land dwelling animals
23 appeared on earth?

24 A. Again, that's changed, from my
25 experience, over time, so I don't -- I don't fix a

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1 specific time period. Again, it's not my area of
2 expertise.

3 Q. Do you know what the consensus is in the
4 field of paleontology on that?

5 A. I have read it, but I don't recall a
6 specific number, but I don't have any problem with
7 it.

8 Q. Would 450 million years ago sound right?

9 A. Sure.

10 Q. You don't have any reason to disagree
11 with that consensus?

12 A. No.

13 MR. WHITE: I'll object to this line of
14 questioning. He said this is all outside of his
15 area of expertise.

16 BY MR. LUCHENITZER:

17 Q. Does intelligent design theory accept the
18 general consensus among paleontologists as to the
19 time line of the development of major kinds of life
20 on earth?

21 A. I think you have a spectrum of people
22 that are looking at that information. Some of them
23 are constrained by their religious beliefs and, you
24 know, there are scientific creationists within the
25 intelligent design camp that wouldn't say that so

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1 they are looking at a young earth viewpoint. And
2 there are other people that accept an old earth
3 scenario, the sequential appearance of organisms in
4 the geologic record.

5 Q. I think before we talked a little bit
6 about the concept of a common ancestry or common
7 decent, and let me try to define common ancestry or
8 decent as not necessarily that life descended from
9 one cell that appeared three or four billion years
10 ago, but that all life today developed from one or a
11 few microorganisms that existed several billion
12 years ago. So let's put aside the question whether
13 it was one or several or a bunch of different
14 ones. Defined broadly in that sense, do
15 you accept the concept of common ancestry or common
16 decent?

17 A. I think it is highly speculative for
18 anybody to make an assertion along those lines based
19 on our knowledge, okay? This is looking at
20 historically -- let me put it this way. The
21 empirical science of nutrition can't figure out if
22 butter or margarine is better for us, yet at the
23 same time we make definitive statements that life
24 arose from primitive ancestral organisms on this
25 planet.

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1 It goes back to the question that I have
2 covered before, what is the capacity to change for
3 any organism? That's an unknown at this point. How
4 did these first organisms appear? You know, what is
5 the mechanism whereby natural law can produce a
6 replicating organism? I mean, that again is an
7 unknown quantity.

8 We know that the smallest free-living
9 organisms on this planet, the micro plasma, have on
10 the order of 300 to 350 genes, okay? So you've got
11 to have at least that amount of information before
12 you can replicate life that we know it at present.
13 That's a lot of information required.

14 Now, is just natural phenomena sufficient
15 to produce that? I'm unwilling to say. From my
16 professional experience, no. Whether you have 10
17 organisms, a hundred organisms, primordial organisms
18 appearing de novo, or one, I mean, you know, it is
19 an event that is on the range of the miraculous,
20 regardless of whether you still believe it is by
21 natural process or a designer, okay?

22 So am I making myself clear?

23 Q. I'm not sure. It sounds like you are
24 saying -- at least it's your personal opinion, based
25 on the scientific understanding that you have, is

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1 that you would not accept the proposition of common
2 ancestry or common decent as I have broadly defined
3 it?

4 A. Okay, look at -- I am trying to think. I
5 want to quote a couple of things from my report
6 directly so it's in the record. From Carl Woese,
7 who is a leading --

8 MR. WHITE: Just for me to clarify, are
9 you talking Exhibit 1? You are quoting from page
10 six, correct?

11 THE WITNESS: Yes, at the top of the
12 page.

13 So this is in the peer-reviewed
14 literature, this is a prominent evolutionary
15 biologist, and looking at what you are talking about
16 in terms of the origin of life.

17 He says, "The creation of the enormous
18 amount of and degree of novelty needed to bring
19 forth modern cells is by no means a matter of waving
20 the usual wand of variation and selection. What was
21 there, what proteins were there to vary in the
22 beginning? Did all proteins evolve from one
23 aboriginal protein to begin with? If you
24 extrapolate that all organisms evolved from one
25 single organism to begin with? Hardly likely!

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1 Q. Are there people within the intelligent
2 design community who would disagree with that
3 conclusion?
4 A. Not that I'm aware of.
5 Q. What aspects of biology do you think
6 natural selection can explain it?
7 A. Oh, I mean, that's the routine tool that
8 we use in the laboratory in terms of genetics and
9 putting selective pressure on organisms and looking
10 for modifications.
11 Q. Do you think that natural selection can
12 explain micro evolution?
13 A. For sure, no problem.
14 Q. How would you — or how do you
15 distinguish between aspects of biology that natural
16 selection can explain and those that it can't?
17 A. Again, it comes back to the question of
18 what are the limits of change of an organism.
19 Q. Do you have an opinion whether natural
20 selection and random mutation can produce new genes
21 with new functions?
22 A. They can take existing information that
23 can be modified to produce similar, and over time
24 some different properties. In other words, you can
25 expose an organism to a man made compound that has

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1 Q. That seems pretty close to what I have
2 down here, but I will just read you back what I have
3 here, which I believe is the actual definition. It
4 is a quote.
5 "A well substantiated explanation of some
6 aspect of the natural world that can incorporate
7 facts, laws, inferences, and tested hypotheses."
8 A. Sure.
9 Q. Do you accept that as a valid definition
10 of a valid scientific theory?
11 A. Yes, I do.
12 Q. And under that definition does
13 intelligent design qualify as a scientific theory?
14 A. Yes.
15 Q. I'm going to read you a definition from a
16 Ken Miller's Biology Book of Science.
17 "First, science deals only with the
18 natural world; second, scientists collect and
19 organize information in a careful, orderly way,
20 looking for patterns and connections between events;
21 third, scientists propose explanations that can be
22 tested by examining evidence."
23 Would you agree with that definition?
24 A. Sure, it's right out of his biology
25 textbook. And in fact, you know, I was asked to

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1 carbon and nitrogen that has a potential use for
2 energy, okay, and cycling into other components of
3 the cell.
4 It may be recalcitrant, you know, so it
5 it has never appeared on earth before. There are
6 organisms that aren't specifically capable of
7 breaking down and utilizing that compound, but over
8 time, if you put stress on the organism, you can
9 develop, modify enzymatic pathways that will evolve
10 and use and break open, say, a chlorinated biphenyl,
11 or something like that. So I have no problem with
12 that.
13 Q. How would you define science?
14 A. Science is the discipline of accumulating
15 knowledge of the natural world.
16 Q. Are you familiar with the National
17 Academy of Science's definition of scientific
18 theory?
19 A. Yes.
20 Q. Would you know it off the top of your
21 head?
22 A. I could paraphrase it. It would be a
23 statement or a set of statements that explain a set
24 of facts or phenomena through, you know,
25 experimentation or observation.

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1 review a biology curriculum for a private Christian
2 school and they had a — I don't know where their
3 curriculum was from, but it was creationist. I
4 said, "Use Ken Miller's book, augment it with Pandas
5 and Peopie if you want a counter-argument. But I
6 have no problem.
7 If you read further in that paragraph he
8 says, "Theory are subject to change as new
9 information is gathered and compared to the model of
10 any theoretical explanation."
11 That's a history of science, is
12 revolutions in thought. You accumulate more
13 information or you look at it in light of new
14 circumstances and you go back and you modify
15 theories to be consistent with observed fact or
16 experiments.
17 Q. Can you tell me what the difference is
18 between a hypothesis and a scientific theory?
19 A. Well, they can be used interchangeably,
20 and they are all the time from a working
21 perspective.
22 I have a student that will come in and
23 say, "Hey, I have a theory that this gene is
24 participating in knocking out this function in a
25 white blood cell." Fine. You know, that's really a

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- 1 hypothesis.
- 2 A hypothesis is an idea that predicts
- 3 certain outcomes that are testable experimentally.
- 4 all right? Then once you carry out the experiment
- 5 or a set of experiments, is it consistent with your
- 6 original hypothesis? So it can be something as
- 7 simple as an idea or a conjecture. First, as a
- 8 theory, which is more formally, you know -- and
- 9 according to the National Academy is based on well
- 10 documented experimental evidence that has been
- 11 accumulated over time and subject to experimental
- 12 verification.
- 13 Q. And then it is your opinion that
- 14 intelligent design is a scientific theory, is that
- 15 correct?
- 16 A. Yes.
- 17 Q. And with reference to the National
- 18 Academy of Science's definition, can you explain how
- 19 intelligent design satisfies that definition? Maybe
- 20 we should go by the components of the definition
- 21 The first component is a well
- 22 substantiated explanation. Can you explain how
- 23 intelligent design theory can be considered a well
- 24 substantiated explanation?
- 25 A. Looking at the public evidence, okay, in

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- 1 data. But it changed our view of the universe.
- 2 okay?
- 3 And in the same way I think we are at the
- 4 stages where we are looking at the natural record
- 5 and saying, based on inference, well substantiated
- 6 records from paleontology, from molecular biology,
- 7 from biochemistry, from genetics, that there is a
- 8 limitation to our current theory of natural
- 9 selection; that we infer intelligence. And that's
- 10 going to contribute to biological systems.
- 11 It will have an impact. Just because
- 12 Einstein had a metaphysical problem with the
- 13 predictions of his equations, and he even modified
- 14 those equations to remove the fact that the universe
- 15 had a point in time beginning in history, I think
- 16 impeded thought, okay?
- 17 And this is a question that I have in
- 18 terms of our present state of biology. Intelligent
- 19 design has been characterized as a religious
- 20 position, a non-scientific position, because it goes
- 21 against the current consensus.
- 22 Now, I think as a scientist there are
- 23 legitimate claims, legitimate questions, legitimate
- 24 criticisms that we are bringing out on the table
- 25 and have to be addressed by our current

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- 1 terms of the natural record, can you explain it
- 2 based on inference to an intelligent designer? It
- 3 is a new theory and it is going to be modified over
- 4 time, and this is the way science works.
- 5 Let me give you an example. Until the
- 6 1930s the consensus viewpoint in science was that we
- 7 had a static universe, okay? And then Einstein
- 8 comes up with his equations and relativity and is
- 9 bothered by the fact that when you run these
- 10 equations through, it looks like the universe had a
- 11 point in time and history where it began.
- 12 Now, this was contrary to the accepted
- 13 consensus view of all scientists at the time period
- 14 and he didn't like the implications, from my
- 15 understanding of historical science, because of the
- 16 metaphysics.
- 17 Then you have independent observations of
- 18 Hubble and other astrophysicists that show you have
- 19 red shifts, you have got galaxies that appear to be
- 20 moving away, and you have a real monumental change
- 21 in our understanding of the universe in terms of
- 22 what was accepted theoretically. And then as new
- 23 data came in, it took time, it took argument, it
- 24 took reformulating how we could do experiments to
- 25 address this inference based on a minimal set of

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- 1 understanding of neo-Darwinism. We are being
- 2 marginalized as a non-scientific approach just as
- 3 people had problems with Einstein's predictions or
- 4 Hubble's predictions because of the metaphysical
- 5 implications of how we viewed the universe and our
- 6 position in it.
- 7 People object to my position because of
- 8 the same -- for the same reasons. Nonetheless, the
- 9 data will drive us in that direction, the science
- 10 will drive us in that direction. We may be wrong,
- 11 okay? We are going to have to stand the test of
- 12 criticism and the dialogue and, you know, we may be
- 13 wrong, that's a possibility. But I think our model
- 14 is consistent with the public evidence.
- 15 Another critical aspect to this debate is
- 16 that if the other side is wrong in part, and I'm not
- 17 saying that they are wrong in total, but in part, if
- 18 there are positions that neo-Darwinism draws or
- 19 inferences that it draws that are incorrect, that
- 20 could have an impeding effect on the advancement of
- 21 science, just like Einstein's reluctance to accept
- 22 that there was a point in time start in the universe
- 23 That opened up entire new vistas in terms
- 24 of looking at the universe if it proposed at that
- 25 point unforeseen experiments that could be done to

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1 verify it.

2 So are you getting my point? You are
 3 asking me, is intelligent design based on the
 4 National Academy of Science's definition of a
 5 theory based on a well substantiated explanation.
 6 We are at an infancy at this point. It is
 7 controversial, it is heretical based on the common
 8 consensus. But that's the history of science.
 9 Whenever you have a new interpretation it is going
 10 to be fought in the public arena.
 11 Q. You say it's in its infancy, how do you
 12 — what is the basis for saying it has risen above
 13 all of the hypotheses and up to the level of a
 14 scientific theory?
 15 A. Because we are looking at the natural
 16 world and we are seeing information storage systems
 17 coded systems that in any other context we would
 18 ascribe an intelligence behind it. You look at the
 19 genetic code — I mentioned Bill Gates is envious of
 20 the ability, you know, the mechanism whereby that
 21 information is stored. It's the most efficient
 22 storage system in the universe. It has true
 23 characters by which information is extracted from
 24 it. It's not unlike an alphabet, it's not unlike a
 25 musical scale, it's not unlike mathematical symbols.

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1 answer from before.

2 MR. LUCHENITSER: I'm comfortable with
 3 the answer, I don't need anything more on that.
 4 THE WITNESS: The last bit of the
 5 sentence. So I'll continue with the statement, "The
 6 molecular machines in even the simplest of organisms
 7 produced by evolution dwarf the sophistication and
 8 subtlety of machines produced by man, essentially.
 9 I mean, that's a paraphrase.
 10 BY MR. LUCHENITSER:
 11 Q. Does the science only consider natural
 12 causes?
 13 A. Not necessarily, okay? You always look
 14 for natural explanations first. I mean, that is
 15 consistent. But I mean, there are sciences that
 16 look for signs of intelligence, whether it is the
 17 SETI project, if you are a forensic scientist, if
 18 you are an archeologist, you know? You are looking
 19 at natural products and asking is there an
 20 intelligence involved in what you are seeing.
 21 Q. Does science ever consider supernatural
 22 causes?
 23 A. Under our current definition of science,
 24 natural methodological science excludes
 25 supernatural, but that hasn't been the case.

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1 okay? It's a true code.

2 Our experience tells us whenever we find
 3 a code there is a coder. In the same context, we
 4 look at subcellular machines, a new view of our
 5 understanding of the cell that is within the last 40
 6 years. We didn't know about the bacterial flagellum
 7 and how sophisticated it was, we didn't know about
 8 DNA replication and their profound efficiency and
 9 editing functions.
 10 We have to look at this new data and say
 11 is natural selection up to the task to produce this
 12 level of complexity and specification?
 13 Put it this way, on the Genome To Life
 14 web site that was produced by the Department of
 15 Energy several years ago, they make the statement in
 16 the introduction that is to be read by the public
 17 that, "The molecular machines we find in the
 18 simplest of organisms produced by evolution dwarf
 19 the engineering feats of the twentieth century."
 20 Natural laws undirected, unintelligent,
 21 un-in-purpose, un-forward looking can produce
 22 machines more sophisticated than the entire
 23 community of intelligent design engineers.
 24 (Off the record.)
 25 MR. WHITE: He was going to finish his

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1 historically.

2 Q. Is the idea that science doesn't consider
 3 supernatural causes as methodological naturalism an
 4 accurate term for that concept?
 5 A. Right, if you are only going to — if you
 6 are going to define science as only accepting
 7 natural cause and event to explain the phenomenon
 8 you are studying, fine, if that's your definition of
 9 science. It may not be the reality or the truth of
 10 the situation.
 11 Q. Do you disagree with the current
 12 definition of science that does not — that's too
 13 many negatives.
 14 I think you agree that the current
 15 definition of science does not consider supernatural
 16 causes. Do you disagree that that should be the
 17 correct definition?
 18 A. It's a qualified disagreement, especially
 19 in this debate. If the science is pointing you to
 20 an intelligent cause, then you have to go where the
 21 data leads. If you are limiting your
 22 interpretation, your interpretations, or what you
 23 will accept as interpretations, it has consequences.
 24 And I'm the first person to say we look
 25 for natural causes, natural explanations first, all

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1 right? But I'm not opposed to looking at the data
 2 any more than a forensic pathologist is and saying,
 3 you know, is it a natural death or was this a
 4 designed death, is this a murder?
 5 Is natural law sufficient to describe
 6 life forms on this planet or not? It's a valid
 7 question. If it is insufficient, then that implies
 8 that there may be an intelligence behind it, or in a
 9 definitional term, a supernatural cause. But I'm
 10 not saying supernatural in the way that you would
 11 imply superstition or a specific god, et cetera. It
 12 is just above the natural explanation.
 13 Q Would you agree with the proposition that
 14 in order for intelligent design theory to be
 15 considered valid science, science has to go beyond
 16 the concept of methodological naturalism?
 17 A It would have to be modified. But again,
 18 this is an artificial definition, in my mind. If
 19 you are only going to accept natural explanations,
 20 then that's all you are going to see, because by
 21 definition you aren't even going to allow any other
 22 explanation into the conversation.
 23 Q So in order for intelligent design theory
 24 to be valid science, does the definition of science
 25 have to be broad enough so that science can consider

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1 supernatural causes?
 2 A Right, I mean, isn't that what is going
 3 on in NASA when you have all these radio telescopes
 4 pointed out in the universe and asking the pattern
 5 of pulsar magnetic radiation, different types of
 6 radiation coming at us? Is it all just natural, or
 7 is there somebody out there that has intelligence
 8 that is trying to communicate with us?
 9 I mean, that is going beyond that is
 10 looking at the natural data and saying, "Is there an
 11 intelligence behind it?" That is legitimate. You
 12 are looking for patterns, you are looking for
 13 specificity, and it is being used now as part of our
 14 scientific methodology.
 15 Q but there you are talking about looking
 16 for extraterrestrial life, so it still seems that
 17 you are looking at natural actors as opposed to the
 18 supernatural actor. Now with respect to intelligent
 19 design theory, doesn't -
 20 A intelligent design theory doesn't rule
 21 out the fact that those natural actors may have a
 22 super intelligence that participated in development
 23 of life on this planet, okay? And we don't know
 24 that they exist so it is supernatural to our
 25 experience. We don't know that there are aliens out

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1 there. We don't rule them out, we don't know they
 2 haven't visited this planet. So that is, by
 3 definition, supernatural, and there are a lot of
 4 scientists that agree.
 5 Francis Crick looked at the common
 6 evidence in biology and said life could not arise on
 7 this planet de novo, it was seeded by some
 8 extraterrestrial source, in formulating his theory
 9 of Pan Sperma, all right? Nobel laureate, looking
 10 at the evidence, saying that there is some
 11 supernatural event in terms of our understanding of
 12 natural events on this planet, that solar winds blew
 13 in some primitive organism or someone visited this
 14 planet and seeded life. I mean, that's pretty far
 15 out, but it is one of the hypotheses.
 16 Q Let me draw your attention to the top of
 17 page 10 of your report, all the way to the top. You
 18 say, "The real problem may not be determining the
 19 best explanation of the origin of the flagellum.
 20 Rather it may be amending the methodological
 21 strictures that prevent consideration of the most
 22 natural and rational conclusion."
 23 Can you tell me what you meant by
 24 amending the methodological strictures?
 25 A In other words, it is limiting our

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1 interpretation of natural phenomena. It has
 2 consequences. If you are only going to accept the
 3 laws of physics and chemistry, time and chance, as
 4 an explanation of life on this planet, how it arose,
 5 how it diversified, that could have - that could be
 6 a methodological stricture that has consequences in
 7 terms of the progress of science.
 8 Going back to Einstein's experience, he
 9 came up with a radical new interpretation of the
 10 universe that had philosophical, religious,
 11 metaphysical implications. Whoever you want to
 12 call it, he didn't like it, all right? And he
 13 essentially fudged his equations to eliminate that
 14 interpretation that impeded science.
 15 All I'm saying is that I think in
 16 biological systems we infer, in a consensus
 17 viewpoint, that natural cause and effect is
 18 sufficient to explain what we see, and I disagree
 19 with that. It has the same types of implications
 20 that were faced by the big bang theory, and that's a
 21 legitimate area of exploration scientifically.
 22 Q On page one you say, kind of in the
 23 middle of the last full paragraph on the page, you
 24 refer to neo-Darwinism as the generally accepted
 25 mechanism. So you would agree that evolution is a

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1 generally accepted theory in the scientific
2 community?
3 A. Sure.
4 Q. Would you agree that intelligent design
5 theory is not generally accepted by the scientific
6 community?
7 Q. Oh, I agree, I agree. Like I said, it is
8 a minority opinion; in some people's minds it is
9 heretical, okay? But again, you can look at the
10 history of science and that's how we progress, by
11 challenging the status quo and holding it up to, you
12 know, an explanatory filter that has got to be
13 consistent with the information as we see it.
14 I think it is legitimate debate. That's
15 why we are here. I respect Ken Miller and he is
16 serving a purpose in this debate, you know? It is
17 -- and I am all for it. I enjoy the interaction
18 that we have had in a limited sense.
19 That's how science works. You have areas
20 of contention that can be small, they can be large
21 with cosmological implications. But that's how we
22 progress, by keeping each other honest.
23 Q. In your report, again I've quoted -- and
24 this is before the beginning of the last paragraph
25 on page one, you state that: "Intelligent design

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1 make the same predictions.
2 Q. Do those various kinds of examples you
3 just gave, do these homologist structures -- do they
4 have identical genetic codes?
5 A. Some of them do, some of them don't. And
6 that's another interesting point that Simon Conway
7 Morris brings up in his paper that is included in
8 mine. If you believe in common decent, you would
9 think that organisms that have the same body plan
10 would develop through the same genetic program.
11 So there are, to my understanding,
12 invertebrates, such as sea stars, that go through
13 intermediate larval stages that are vastly
14 different. In fact, they weren't even recognized as
15 similar organisms when they are looked at at the
16 larval stage, yet they end up with the same body
17 plan.
18 Morris says it looks like evolution is
19 somehow channeled, and that is a problem with an
20 evolutionary scientist in terms of genetics and the
21 phenotype. And if it is channeled, then teleology,
22 purpose, is back on the table.
23 That's the prominent -- one of the most
24 prominent evolutionary biologists stating and citing
25 an intelligent design by Denton saying that this is

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1 theory holds that the deep complexity and clearly
2 evident design in organisms is the result of an
3 intelligent agent.
4 Do you consider that to be a testable
5 proposition?
6 A. It is as testable as evolutionary theory.
7 Again, if we are looking at -- you know, it is an
8 historical science in one aspect. We are going back
9 and looking at the records, we are looking at our
10 present knowledge and seeing if it is consistent
11 with the model that we currently have. This is as
12 much testable as evolution.
13 Let me give you an example. One of the
14 evidences for neo-Darwinism is molecular and
15 structural homology, okay? You look at the skeleton
16 in my hand, you look at the skeleton of a bat wing
17 you look at the skeleton of a whale fin, there is
18 similarity. Same bones, different size structure.
19 I have a problem in the sense, though,
20 that it is a self-referential argument. I believe
21 in common decent and therefore organisms should have
22 homologies, and because I find homologies, it
23 therefore proves common decent.
24 It doesn't rule out common design, in my
25 mind. Common design is on the table and you would

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1 a legitimate explanation.
2 Q. Now, let's go to the -- I guess there are
3 bird wings and bat wings as kind of an example in a
4 homologous sense. What was the example you were
5 just using a second ago?
6 A. In terms of human skeletal structure for
7 a hand and a bat wing and a whale fin, I mean, they
8 have got similar structures, and therefore you infer
9 that they are related by decent because of
10 homologies at the structural level.
11 Q. Does a scientific theory have to be
12 testable?
13 A. Again, in terms of evolution, and Ernst
14 Mayer's definition, "Laws and experiments are
15 inappropriate for the explication of events and
16 processes when we are dealing with evolution."
17 We are looking at historical records.
18 There are certain aspect that can be testable, but
19 again, there is a lot of inferences and
20 extrapolations that are involved in our current
21 thinking.
22 Q. Is it generally accepted in the
23 scientific community that for something to be a
24 scientific theory it has to be testable?
25 A. It has to be consistent with a body of

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1 was running a haven of graduate students in
 2 intelligent design, which blew me away.
 3 I have never been on the payroll of the
 4 Discovery Institute, and how an individual can come
 5 on this campus and accuse me of fomenting this
 6 conspiratorial perspective, I mean it just -- you
 7 know, he is an expert witness, and boy, if he
 8 performs with that same amount of integrity in his
 9 general work, I have a problem with it.
 10 Q Can you tell me what you do in your
 11 capacity as a fellow for the Discovery Institute
 12 Center for Science and Culture?
 13 A I have no job description. I have never
 14 been given any assigned tasks. Occasionally I am
 15 called up and they say, "Will you review this?" Or,
 16 "Do you want to -- what do you think about this?"
 17 More as a consultant.
 18 But it is pretty minimal, you know? I am
 19 good friends with Steve Meyer. But in terms of a
 20 defined job description or what it means to be a
 21 fellow, no.
 22 Q And are you familiar with a document
 23 called The Wedge Document?
 24 A I have never read it. I am familiar with
 25 it. What I have have read about it is, you know,

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MR. WHITE: Objection, this is -- you are
 2 asking about Discovery Institute's alleged document
 3 here.
 4 MR. LUCHENITSER: I just want to know if
 5 Dr. Minnich agrees with that goal.
 6 THE WITNESS: Which one are you asking
 7 about?
 8 BY MR. LUCHENITSER:
 9 Q The second goal listed in the first
 10 column.
 11 A "To replace materialistic explanations
 12 with the theistic understanding that nature and
 13 human beings are created by God." That's not part
 14 of my agenda, you know?
 15 Q Do you think that's a worthwhile goal to
 16 pursue?
 17 MR. WHITE: Objection.
 18 THE WITNESS: That's a loaded question.
 19 Turn it around, and, you know, Richard Dawkins and
 20 Dan Dennett have an agenda to, you know, replace
 21 religious belief with a materialistic viewpoint of
 22 the world, is that not legitimate? I mean, they are
 23 driven by their world view and they want to see it
 24 adopted. Other people have a different position,
 25 you know. I don't think there is anything

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1 what other people have said about it.
 2 MR. LUCHENITSER: I will ask you to mark
 3 this.
 4 (Deposition Exhibit No. 12 marked for
 5 identification.)
 6 BY MR. LUCHENITSER:
 7 Q We have marked as Exhibit 12 a document
 8 called The Wedge Center for the Renewal of Science
 9 and Culture, Discovery Institute. And I am going to
 10 ask you to flip to -- okay, this says page two up
 11 here, it might be page four of the document?
 12 A It's got this table?
 13 Q Yes, there is a table with three columns
 14 and --
 15 MR. WHITE: I also object on the grounds
 16 of foundational identifications. Professor Minnich
 17 said he has never seen this thing and doesn't know
 18 about it.
 19 BY MR. LUCHENITSER:
 20 Q Where it says "Goals, governing goals,"
 21 in the first column, and the second goal listed is:
 22 "To replace materialistic explanations with the
 23 theistic understanding of nature and human beings
 24 are created by God," do you agree with that goal of
 25 The Wedge document?

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1 inherently wrong with this.
 2 Q Is it a goal of yours or is it not
 3 relevant to what you are doing?
 4 MR. WHITE: Objection, asked and
 5 answered.
 6 THE WITNESS: No. I mean, my goal in
 7 life is to do science, be a father, pay my bills, be
 8 a contributing citizen. I am a Christian and with
 9 that comes holding Christian tenants and doctrines.
 10 There is a commandment in terms of evangelism or
 11 defending your position, but I am not a missionary.
 12 BY MR. LUCHENITSER:
 13 Q Now, are you aware that the Discovery
 14 Institute has issued a press release that is
 15 critical of the actions taken by the Dover School
 16 District that led to this lawsuit?
 17 A I haven't seen it.
 18 Q Okay, I'll give you a copy of it.
 19 A Okay.
 20 (Deposition Exhibit No. 13 marked for
 21 identification.)
 22 BY MR. LUCHENITSER:
 23 Q Okay, we have marked as Exhibit 13 a
 24 document called: Discovery Calls Dover Evolution
 25 Policy Misguided, Calls For Its Withdrawal.

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1 And if you could read the first two
2 paragraphs of that press release and let me know if
3 you agree or disagree with the opinions expressed by
4 the Discovery Institute.

5 MR. WHITE: And I will object to the lack
6 of foundation, no showing of authenticity, and you
7 are asking him to go into the head of the Discovery
8 Institute.

9 BY MR. LUCHENITZER:

10 Q: I just want to know if you agree or
11 disagree with any of the positions expressed there.
12 A: I'm not a policy expert so that's not my
13 area, it's not my expertise so I don't want to
14 comment. So that's my answer.

15 I will say that from the viewpoint of the
16 Discovery Institute and my own personal opinion,
17 intelligent design is not -- should not at this
18 point be part of any curriculum in a public school.

19 Q: So you do agree with that, that it should
20 not be a part of the curriculum?

21 MR. WHITE: Objection, that's not what
22 this paragraph is saying.

23 THE WITNESS: That's not what this is
24 saying. I am just saying, you know -- and they are
25 not -- the Dover -- from my understanding of the

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1 Dover School Board, they are not saying that they
2 are going to incorporate intelligent design into
3 their curriculum, they are going to teach the state
4 board requirements in terms of Darwinian evolution,
5 and that's what they should do.

6 I haven't talked to anybody on the school
7 board and I am not aware of the motivation for the
8 policy that they have written.

9 Q: Are you a member of any other
10 organizations?

11 MR. WHITE: Time out. Exhibit 14 is
12 withdrawn now.

13 MR. LUCHENITZER: I didn't have it
14 marked.

15 MR. WHITE: I'm sorry.

16 BY MR. LUCHENITZER:

17 Q: Are you a member of any other
18 organizations that are in any way involved with
19 intelligent design theory?

20 A: Yes, I think I am. Bill Dembski has a
21 society of -- I don't know what they call it, but
22 they asked me if I wanted to be a fellow and put my
23 name on that as a member, and I have, but I have
24 never -- I mean, I've never done anything or gone to
25 any meetings or participated in any discussions.

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1 Q: Have you ever read the book: Of Panda
2 and People?

3 A: I have skimmed it.

4 Q: Do you know which edition you skimmed?

5 A: The 1993 edition. I think that's the
6 last edition, right?

7 Q: Do you understand that to be the edition
8 that has been made available to students the Dover
9 School District?

10 A: That's my understanding.

11 Q: So you didn't read the whole thing?

12 A: You know, I skipped through -- I have
13 skimmed the whole book. I know what the contents
14 are, basically.

15 Q: Do you believe the book to be an accurate
16 presentation of the intelligent design theory?

17 A: Yes and no. I mean, again, contextually
18 this was written in 1993 and things were just
19 getting off the ground at that point in time. So it
20 is outdated, as any textbook would be that is a
21 biology textbook because of just the rapidity in
22 which data is collected. But the basic arguments, I
23 think, stand in terms of alternative views of
24 looking at the basic principles of it.

25 Q: Is there anything in the book you believe

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1 is incorrect?

2 A: I'm sure any textbook has inaccuracies in
3 it. I don't know of any specifics.

4 Q: Are you aware of a new textbook under
5 development called: The Design of Life?

6 A: I just heard about it in the context of,
7 you know, this lawsuit.

8 Q: Do you have any role in the development
9 of: The Design of Life?

10 A: No.

11 (Deposition Exhibit No. 14 marked for
12 identification.)

13 BY MR. LUCHENITZER:

14 Q: We have marked as Exhibit 14 a document
15 entitled: Dover Area School District News, Biology

16 Curriculum update, and I want to ask you to flip to
17 page two of this newsletter document and read the

18 third paragraph of the first column which starts
19 with the words, "In simple terms on a molecular

20 level scientists have discovered a purposeful
21 arrangement of parts which cannot be explained by

22 Darwin's theory. In fact, since the
23 nineteen-fifties advances in molecular biology and

24 chemistry have shown us that living cells, the
25 fundamental units of life processes, cannot be

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1 explained by chance."
 2 Do you agree with that statement?
 3 A In part. You know, I think this is
 4 written for the lay public. You know, I would
 5 qualify some of these.
 6 Q Do you think the statement is too strong?
 7 A Yes, I mean it's -- I mean, it has a
 8 flavor of an absolute and I hesitate -- you know, I
 9 wouldn't have written it like that.
 10 Q How would you qualify the statement?
 11 A I wouldn't use words like, "Have
 12 discovered a purposeful arrangement of parts which
 13 cannot be explained by Darwinian theory." I would
 14 say when you have -- as I have mentioned before, we
 15 have discovered macromolecular machines that all of
 16 us agree are pretty amazing that we didn't
 17 anticipate, and this throws a new light in terms of
 18 Darwinian mechanism to produce them, and they need
 19 to be reevaluated -- or our consensus viewpoint
 20 needs to be reevaluated.
 21 Q Do you think the statement could mislead
 22 its readers about what the current state of
 23 scientific knowledge is?
 24 MR. WHITE: Objection, calls for
 25 speculation.

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1 BY MR. LUCHENITSER:
 2 Q We have marked as Exhibit 15 a document
 3 called: Intelligent Design. It's in an article
 4 that was published in Touchstone by Dembski called:
 5 A Primer on the Discernment of Intelligent Design.
 6 And if you could flip through the last
 7 page of this article and look at the last paragraph,
 8 I am just going to read you the paragraph and ask
 9 you if you agree or disagree with this.
 10 It states, "The world is a mirror
 11 representing the divine life. The mechanical
 12 philosophy was ever blind to this fact. Intelligent
 13 design, on the other hand, readily embraces the
 14 sacramental nature of physical reality. Indeed,
 15 intelligent design is just the Logos theology of
 16 John's Gospel restated in the idiom of information
 17 theory."
 18 MR. WHITE: Also object, you are having
 19 him take this paragraph out of context of this
 20 article, which is about 11 pages long which he has
 21 never seen before.
 22 THE WITNESS: Yes, I haven't read this
 23 article.
 24 This is Journal of Mere Christianity,
 25 this is a Christian publication written to a defined

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1 THE WITNESS: I mean, that's speculative.
 2 I don't know how the lay public -- I don't know who
 3 this is written for or what context -- I mean, is it
 4 the newspaper article? Is this a --
 5 BY MR. LUCHENITSER:
 6 Q Actually, it's Dover Area School District
 7 News, so this -- I believe it is made available to
 8 both students and parents in the school district.
 9 MR. WHITE: I will just object to lack of
 10 foundation showing authenticity, especially since
 11 Professor Minnich hasn't seen this before.
 12 THE WITNESS: Right. I mean, there is
 13 no, you know, title in terms of journal or
 14 publication that this is present in.
 15 BY MR. LUCHENITSER:
 16 Q That's all right. We can establish that
 17 elsewhere at trial.
 18 But would you, from your standpoint as an
 19 educator, would you support the making of this
 20 statement I quoted to high school students?
 21 A This one here?
 22 Q Yes.
 23 A Not as it is written.
 24 (Deposition Exhibit No. 15 marked for
 25 identification.)

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1 audience. "Mechanical philosophy was ever blind to
 2 this fact. Intelligent design, on the other hand,
 3 readily embraces the sacramental nature of physical
 4 reality."
 5 I'm not really sure what that means.
 6 "Just the Logos theology."
 7 "The world is a mirror representing the
 8 divine life."
 9 It's a question of semantics, but I think
 10 this is consistent with Christian doctrine. Again
 11 going back to Romans, Chapter One, I mean it says
 12 that God has revealed Himself in what has been
 13 created. It is clearly evident, his attributes.
 14 Traditionally, Christian theology has
 15 looked at nature as a second set of scriptures, and
 16 this is really, I think, reforming what that says.
 17 that we can learn about God from the study of
 18 nature. This has been a motivating force even in
 19 the development of science as we practice it today.
 20 agreed to by secular historians and scientists.
 21 So in one sense I don't have a problem
 22 with this. "Intelligent design is just the Logos
 23 theology of John's Gospel." I assume he is referring
 24 to that: In the beginning was the word; in the
 25 beginning was information. That's consistent with:

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